



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/535,735	12/21/2005	Harald Gunnc	095309.56285US	2702
23911 7590 07/26/2007 CROWELL & MORING LLP INTELLECTUAL PROPERTY GROUP P.O. BOX 14300 WASHINGTON, DC 20044-4300			EXAMINER HSIAO, JAMES K	
			ART UNIT 3683	PAPER NUMBER
			MAIL DATE 07/26/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/535,735

Applicant(s)

GUNNE ET AL.

Examiner

James K. Hsiao

Art Unit

3683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 December 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 30-56 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 30-56 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>5/20/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 36-41 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 36-41, as best understood are generally unclear and indefinite. The scopes of the claims are unclear, for example the term "brake effect" is unclear. The driver action on the pedal is a brake effect, the brake interventions is a brake effect. The only prior mention of "brake effect" is in claim 30 in the last line where it is directed towards an "effect" on the rear wheels.

Regarding claims 37 and 38, as best understood, the braking effect initiated by the driver is being reduced by the brake interventions, and in claim 38 the braking effect that is being reduced is done so to an extent that the driver initiated braking effect is being maintained. This is indefinite because it doesn't make sense. How can a braking effect (A) be reduced as a result of (A)?

Regarding claims 38-41, it is unclear what is meant by the term "maintain" and "maintained," what is being maintained? How is it not maintained?

As best understood, the invention detects and evaluates a problem, instability, roll, etc. and then applies a solution, i.e. a brake intervention or yaw moment.

Claim Rejections - 35 USC § 102

Art Unit: 3683

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 30-36 and 42-56 are rejected under 35 U.S.C. 102(b) as being anticipated by Leimbach et al. (DE-10065724).

The following rejection relies upon the above DE reference, however the US equivalent (US-20040080209) will be relied upon for an English translation.

Regarding claim 30, Leimbach et al. discloses a method for determining and evaluating at least one dynamic movement input variable (abstract); if a rolling movement of the vehicle combination is detected by means of the evaluation, implementing at least braking interventions for stabilizing the dynamic movement state of the vehicle combination for the towing vehicle (paragraph 5); and producing a yaw moment which counteracts the rolling movement of the vehicle combination, by means of braking interventions which are applied to the front wheels of the towing vehicle (paragraph 31); wherein, braking interventions are implemented at the rear wheels of the towing vehicle; only when a predefined operating state of the vehicle combination is present; and the braking interventions which are implemented at the rear wheels effect an essentially constant braking at the rear wheels (paragraph 31).

Regarding claims 31 and 33, Leimbach et al. discloses wherein the predefined operating state of the vehicle combination, in which braking interventions are implemented at the rear wheels, is present if a rolling movement of the vehicle

Art Unit: 3683

combination is detected at a time when there is no braking by the driver and the vehicle combination is located on an underlying surface with a low coefficient of friction (paragraph 28).

Regarding claims 32 and 34, Leimbach et al. discloses wherein the predefined operating state of the vehicle combination in which braking interventions are implemented at the rear wheels is present if a rolling movement of the vehicle combination is detected and at a time when there is no braking by the driver (paragraph 28) and the braking interventions which are applied to the front wheels causes a risk of the front wheels locking. When brakes are applied there is always a "risk" of wheel lock.

Regarding claims 35 and 36, Leimbach et al. discloses wherein the predefined operating state of the vehicle combination in which braking interventions is implemented at the rear wheels is present if a rolling movement is detected during a driver initiated braking process, and vehicle deceleration occurring as a result of the driver initiated braking process fulfills a predefined comparative criterion (paragraph 28, lines 1-5).

Regarding claim 42, Leimbach et al. discloses wherein the braking interventions, which are applied to the front wheels, give rise to braking forces, which are composed of a basic force and a dynamic force component (paragraph 4).

Regarding claim 43, Leimbach et al. discloses wherein at least the towing vehicle is equipped with one of a hydraulic, an electrohydraulic, a pneumatic, and an electropneumatic brake system; and the braking interventions which are applied to the front wheels are such that a brake pressure which is composed of a basic pressure and

Art Unit: 3683

dynamic pressure peaks is supplied to wheel brake cylinders assigned to the front wheels (paragraphs 3 and 4).

Regarding claim 44, Leimbach et al. discloses wherein a yaw moment which counteracts a rolling movement of the vehicle combination is produced by the dynamic force component (paragraph 31).

Regarding claim 45, Leimbach et al. discloses wherein a value of the basic force or pressure is determined as a function of a deviation in a yaw angle rate, in particular the deviation results from the difference between the actual value for the yaw angle rate which is determined using a yaw angle rate sensor and a setpoint value for the yaw angle rate which is determined using a mathematical model (paragraph 31-39).

Regarding claim 46, Leimbach et al. discloses wherein the value for the dynamic force component is determined as a function of a variable, which describes a change over time of a deviation in the yaw angle rate (paragraphs 31-39).

Regarding claim 47, Leimbach et al. discloses wherein both the basic pressure and the dynamic pressure peaks decrease as the rolling movement decreases (paragraphs 31-39).

Regarding claim 48, Leimbach et al. discloses wherein engine interventions are also carried out in addition to braking interventions; and a moment which is output by the engine is set by means of the engine interventions in such a way that substantially no circumferential forces occur at the driven wheels of the towing vehicle (paragraph 29).

Regarding claim 49, Leimbach et al. discloses wherein engine interventions are carried out in addition to braking interventions; and torque which is output by the engine is set by the engine interventions in such a way that friction losses which occur in the drive train are compensated and the driven wheels are given a neutral setting as far as the circumferential force is concerned (paragraph 29).

Regarding claim 50, Leimbach et al. discloses a stabilization system that include brake interventions. Once the vehicle is stable again the braking interventions are ceased and normal driving operations continue.

Regarding claim 51, Leimbach et al. discloses wherein braking interventions are carried out at the front wheels as a function of one of a value of sensed yaw moment which acts in the vehicle and a value of the sensed yaw acceleration (paragraph 31).

Regarding claim 52, Leimbach et al. discloses wherein at least a yaw angle rate of the towing vehicle is determined and evaluated as a dynamic movement input variable (paragraph 31).

Regarding claim 53, Leimbach et al. discloses wherein vehicle speed, yaw angle rate and steering angle are evaluated to determine whether a rolling movement is occurring (paragraph 4).

Regarding claim 54, Leimbach et al. discloses wherein a rolling movement is occurring if the yaw angle rate exhibits an oscillating behavior in an operating state of the vehicle combination in which the vehicle speed is higher than an associated threshold value, even though the driver is not making any steering interventions (abstract).

Regarding claim 55, Leimbach et al. discloses wherein the presence of a rolling movement of the vehicle combination is detected as a function of a deviation variable which includes a deviation between actual value of the yaw angle rate and an associated set point value (paragraphs 31-39).

Regarding claim 56, the rejection of claim 56 relies upon the subject matter as is read above.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Lu, Horn, Oh, Ehret, Nagae, Hecker, and Funke all disclose methods for stabilizing the driving state of trailer vehicles.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James K. Hsiao whose telephone number is 571-272-6259. The examiner can normally be reached on Monday through Friday 8:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Siconolfi can be reached on 571-272-7124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3683

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JKH

DEVON C. KRAMER
PATENT EXAMINER
Devon Kramer
7/22/07